C-3-b. Coastal Flats/Bottom Land, Grazing, Pasture Options Worksheet

1	STATE	Hawaii
2	FIELD OFFICE	Lihue, Aiea, Hoolehua, and Waimea
3	MLRA	163
4	COMMON RESOURCE AREA (CRA)	**Coastal Flats/Bottom Land**
5	RESOURCE INTERPRETATIONS	*see Section II FOTG for interpretations*
5.1	SOIL	
5.2	WATER	
5.3	AIR	
5.4	PLANT	
5.5	ANIMAL	
5.6	HUMAN	
6	HYDROLOGIC UNIT	2001000 / 20050000 / 20060000 / 20070000
7	SYSTEM TEMPLATE LABEL	**CFA22**
8	SYSTEM NAME	**Coastal Flats/Bottom Land, Grazing, Pasture**
9	PLANNING PHASE	Non-Benchmark
10	PLANNING LEVEL	RMS
11	NRCS LANDUSE	PAST
12	PLANNED CONS. PRACTICES	*enter code / name of practice*
	1. 314 Brush Management 2. 322 Channel Vegetation 3. 338 Prescribed Burning 4. 378 Pond 5. 380 Windbreak / Shelterbelt Establishment 6. 382 Fence 7. 412 Grassed Waterway 8. 430 DD Irrigation Water Conveyance, Pipeline, High-Pressure, Underground, Plastic 9. 442 Irrigation System, Sprinkler 10. 449 Irrigation Water Management 11. 472 Use Exclusion 12. 512 Pasture and Hay Planting 13. 516 Pipeline 14. 521 A Pond Sealing or Lining Flexible Membrane 15. 528 A Prescribed Grazing 16. 560 Access Road 17. 575 Animal Trails and Walkways 18. 590 Nutrient Management 19. 595 Pest Management 20. 612 Tree / Shrub Establishment 21. 614 Watering Facility 22. 644 Wildlife Wetland Habitat Management	
13	SYSTEM NARRATIVE	*describe how the practices work together as a system*
	Pasture will be intensively grazed and managed. The proposed grazing management system will improve or maintain forage production, reduce erosion, and protect nearby coastal waters from sedimentation and other pollutants.	

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14	RESOURCE CONCERNS	MAGNITUDE/EFFECTS	IMPACTS
	1. Soil / Erosion / Sheet & Rill Erosion	1. Sheet & rill erosion will be reduced to an acceptable soil loss tolerance level of 5 tons/acre/year or less.	1. Productive topsoil will not erode at an accelerated rate. Soil loss is reduced by ___ tons/acre/year.
	2. Soil / Erosion / Streambank Erosion	2. Streams will carry runoff water without eroding.	2. Grazing area is not reduced by sloughing of streambanks.
	3. Soil / Condition / Tilth, Crusting, Infiltration, Organic Matter	3. Proposed management techniques will enhance soil tilth.	3. General soil health will improve condition for optimum forage growth.
	4. Soil / Condition / Soil Compaction	4. Traffic areas will be avoided or rested.	4. Forage production will increase.
	5. Soil / Condition / Excess Chemicals in Soil	5. Risk of contamination from pesticides is evaluated.	5. Pesticides are properly applied to prevent degradation of water resources.
	6. Water / Quantity / Runoff/Flooding	6. System installation will stabilize soils with vegetative cover and proper land shaping.	6. Cost of property damage will be reduced after landscape is stabilized.
	7. Water / Quantity / Soil Saturation	7. Excess water is managed to allow accessibility to grazing operations.	7. Operation costs are minimized.
	8. Water / Quantity / Irrigation Water Management	8. Designed irrigation system will efficiently distribute water to grasses.	8. Water is conserved and forage production will increase.
	9. Water / Quality / Pesticides in Groundwater	9. A pest management plan will assess the risk of further groundwater contamination.	9. Pesticides are properly managed and used to minimize groundwater contamination.
	10. Water / Quality / Nutrients & Organics in Surface water	10. Potential for contamination from nutrients will be evaluated.	10. Nutrients are properly applied according to soil and plant tissue analysis.
	11. Water / Quality / Suspended Sediment & Turbidity in Surface Water	11. Amount of sediment in runoff water is minimized.	11. Effects from suspended sediment and turbidity to aquatic habitat, recreation waters, and other downstream waterbodies are minimized.
	12. Animal / Habitat / Threatened & Endangered Species	12. Food, water, and shelter of threatened or endangered species will not be affected by agricultural activities.	12. Threatened or endangered animals will have a suitable habitat for growth and reproduction.

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CRA	SYSTEM TEMPLATE LABEL		
15	* QUALITY CRITERIA DOCUMENTATION *list resource concerns then indicate yes/no (X)*		
	1. Sheet & Rill Erosion	☒ YES	☐ NO
	2. Streambank Erosion	☒ YES	☐ NO
	3. Tilth, Crusting, Infiltration, Organic Matter	☒ YES	☐ NO
	4. Soil Compaction	☒ YES	☐ NO
	5. Excess Chemicals in Soil	☒ YES	☐ NO
	6. Runoff/Flooding	☒ YES	☐ NO
	7. Soil Saturation	☒ YES	☐ NO
	8. Irrigation Water Management	☒ YES	☐ NO
	9. Pesticides in Groundwater	☒ YES	☐ NO
	10. Nutrients & Organics in Surface Water	☒ YES	☐ NO
	11. Suspended Sediment & Turbidity in Surface Water	☒ YES	☐ NO
	12. Threatened & Endangered Species (Animal)	☒ YES	☐ NO

* Provides an indication that the resource quality criteria will be met.